National Institute of Environmental Health Sciences

Global warming and possums: Contributors in the future to new mosquito-borne human diseases in New Zealand?

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Abstract:

New Zealand has, so far, been spared from the transmission of mosquito-borne viruses (arboviruses) and other pathogens. Among these viruses are the Ross River virus (endemic in Australia), and strains of dengue virus that sometimes cause outbreaks of dengue fever in the South Pacific region. The three major conditions that must be fulfilled for virus transmission to occur (either to human or non-human host), are: (1) A reservoir of virus in a viremic warm-blooded species, which can include birds as in the case of the West Nile virus; A mosquito species with vector potential (i.e. can spread infection by conveying pathogens from one host to another such as from possums to humans); and (3) An ambient temperature sustained long enough for viral replication to occur in the vector. Thus animal reservoirs of virus, such as possums, may pose a threat to humans if vectors feed indiscriminately on animal and human hosts.

Source: http://www.ncbi.nlm.nih.gov/pubmed/18264208

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: General Mosquito-borne Disease

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Policy/Opinion

Timescale:

time period studied

Time Scale Unspecified